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## Changes in reading habits by low literate adults through extensive reading

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### Abstract

This study analyzes the effect of two reading interventions on reading habits by 181 low literate adults who read at the 3-5.9 grade levels. One intervention implemented extensive reading (ER group) and the other one had direct instruction (no-ER group). A Reading Pattern survey was administered at the beginning, at the end, and 6 months after the intervention. Statistical results suggest that the ER group, which had access to books, free choice of reading material, and time to read during instruction hours, was more motivated to read, developed a reading habit, and experienced a positive change in reading behavior. These changes stayed over time, 6 months after treatment. This study strongly suggests that adult learners can benefit from extensive and pleasure reading and that a well-equipped library, easy access to books, and encouragement and time to read are all key factors in the development of reading habits.

**Keywords:** reading habit, literacy behavior, low literate adults, extensive reading, pleasure reading, library, reading attitude

This study is part of a larger research<sup>1</sup> endeavor on the effect of different instructional approaches to reading for adults (ages 16 and older) who read single words and are between 3 and 5.9 grade equivalency levels (both native and non-native speakers of English were included in this study). As part of the larger study, gains in phonological awareness, orthography, fluency, vocabulary, and reading comprehension were measured. The results showed that the participants showed some improvement, albeit with small effect sizes and no statistically significant differences among the several instructional approaches (for a detailed explanation of the results see Greenberg, Rodrigo, Berry, Brinck, & Joseph, 2006). On the premise that effectiveness of a particular instructional approach should not be measured by focusing only on reading skill gains but also on changes in literacy behavior (Reder, 2009), we examine whether the changes in reading habits among the participants can be attributed to a particular reading intervention.

The concept of *reading habit* is defined as “how often, how well, and what adults like to read” (Scales & Rhee, 2001, p. 178). In the present study, we analyze *reading habits* by measuring how frequently the participants read novels, whether they read entire books, and whether, after

receiving instruction, they developed a disposition to read and engage in literacy-related activities such as visiting a bookstore and libraries. We also examine if such reading habits, if observed, remain over time.

The literature in the field of Adult Education, most commonly under the notion of *literacy practice* (*reading habits* in our study), refers to people's reading activities as a twofold distinction of both types of material they read and/or write and how frequently they engage in reading them (i.e., frequency of engagement). Smith, in a seminal 1996 study, described the literacy practices of 24,842 adults, 19 years old and older, in the US by relating reading practices and literacy proficiency<sup>2</sup>. The participants were classified according to how frequently they read newspapers, magazines, books, and documents. The results showed that a majority of the subjects would engage in a variety of practices, and a majority of the participants read at least two print materials (newspapers, magazines, or books) regularly. The results also showed that the more proficient a subject, the more frequently he/she reads. That is, reading practice and literacy proficiency were strongly associated and therefore education, a setting in which reading is more commonly practiced, becomes a predictor of literacy proficiency. The study also established that differences in reading practice related to socio-demographic variables such as age group, lifestyle, occupation, and real life demands. Additionally, in analyzing reading practices among different age groups, in general, 14% of the young group (19 to 24 year-olds) reported almost no activity in any of the previously identified reading practices; among the oldest group (age 65+), 26% did not read anything; and in the remaining group (age 25 to 64), 12% reported almost no reading. More specifically, for newspapers, older adults read significantly more sections than young adults, and more often the youngest adults tended to rely on television for information. Additionally, reading books was shown to decrease with age: young people read more books, especially fiction, than older people. These findings were consistent with previous research done by Robinson (1980; as cited in Smith, 1996).

In an interesting descriptive and correlational study, Purcell-Gates, Degener, Jacobson, and Soler (2002) examined the change in out-of-school literacy practices by 159 adults attending 22 literacy programs in the US. By *change* in literary practices these researchers meant that their subjects adopted new reading habits and read more frequently. The participants had different levels of education, from preliterate to 11<sup>th</sup> grade or higher. English speakers of other languages were included in the study only if they did not have a high school diploma in their native tongue and if they were working on acquiring English language skills. The results indicated that the use of real-life activities and material in class, that is, authentic material, had a significant effect on the participants' literacy practices. The factors that most strongly related to change in literacy practices were literacy level and the amount of time spent in literacy classes.

In another study, Mellard, Patterson, and Prewett (2007), examined the influence of age, gender, education level, reading level, self-reported learning disability, and employment status on reading practices and reading performance on 213 subjects with literacy levels ranging from low-intermediate through high school level reading skills. English speakers of other languages were not included in this study. This study focused on types of print material (books, newspapers, magazines, letters, e-mails, work manuals, instructions) and how frequently the subjects would read them. The results showed statistically significant differences in reading practice by age, gender, self-reported language disability, and reading level. Reading practice by age showed that

as age increased, the participants more often read newspapers, books, and work manuals, while the younger participants more often read magazines. In gender terms, females more often read newspapers, magazines, books, and letters or e-mails than males. Also, the subjects with higher reading levels and those without self-reported disability read more often.

Finally, Scales and Rhee (2001), when comparing reading habits among white adult Americans and Asian Americans, found that education, gender, and race were significant predictors of how often and how well literate adults read, suggesting that adults read what relates to their lifestyle and culture. The studies above, therefore, indicate that, generally, multiple factors may play a crucial role on the creation of reading habits by adults. It should be noted that all of these studies are based on self-reported data.

Research has also found that an important factor in the development of a reading habit is a positive attitude toward reading, clearly a catalyst for continued practice: the more one reads, the better one becomes (Kim, 2003). Thus, studies in first language (L1) have focused on ways to promote a positive reading attitude among children. Nathanson, Pruslow, and Levitt (2008) found evidence among so-called enthusiastic readers that early reading experiences with parents and at school had an effect on reading attitude. Similarly, children's exposure to reading material that was interesting to them promoted a positive reading attitude (Healy, 1963), a result also observed when children were read to (Trelease, 1995) and when Sustained Silent Reading was implemented at school (Halpern, 1981). For literate adults, several studies have reported correlations between a positive attitude toward reading and an ability to discuss the books learners are reading, as mentioned by Brittain (1981), and Dillingosfsky and Dublin (1980; as cited in Smith, 1989).

In a second language (L2), a positive attitude toward reading has been related to having a positive reading experience. Reading was pleasurable when a reader achieved a sense of accomplishment due to comprehension of the reading material and when it was done in a non-threatening environment (Cho & Krashen, 2001; Elley, 1991; Rodrigo, 2011). In promoting a positive reading attitude, extensive reading (ER), also known as *pleasure reading* or *free voluntary reading* (Krashen, 1993), has proven to be effective. ER means that reading is done in large amounts, the reading material is interesting and at an appropriate linguistic level, and the reading is done for content and personal enjoyment. Most of the ER studies have been done with children and young learners in L1 and with subjects for whom English was a second or a foreign language (for a detailed account of these studies see Day & Bamford [1998] and Krashen [2004, 2010]). Linguistic gains, such as in reading comprehension, reading fluency, writing, vocabulary, and grammar, are more likely to be observed in long-duration programs, generally implemented for a whole year (Pilgreen & Krashen, 1993). However, affective gains, reflected in the appearance of measurable positive attitudes toward reading, reading habits, and self-confidence as a reader, have been observed in short-duration programs.

One study that shows the positive effect of ER is a study conducted by Nash and Yuan (1992/93), in which the authors described an ER course for Taiwanese university students learning English as a foreign language. The participants had to read for meaning, enjoy the reading, and had to keep a journal entry, a reading log, and participate in group discussions. The authors mentioned that, as a result of implementing ER, students developed a reading habit. Constantino

(1995) reported that in a one-semester class for adult English as a second language (ESL) students in the U.S., pleasure reading showed positive results not only in language gains but also in affective improvement since the participants became more confident about their skills. In another study, Leung (2002) analyzed the impact of ER on reading attitude of adult Japanese students during a 20-week program. The data were collected from self-reports through diaries, audio recordings, and a personal session. This study concluded that ER promoted a positive reading attitude. Similarly, Al-Houmoud and Schmitt (2009) conducted a short duration study comparing the impact of extensive reading versus intensive reading in which they found a more positive reading attitude among the students using ER. Finally, Liburd and Rodrigo (2012), in a short-term case study of American college students studying Spanish as a foreign language, found that a 5-week program using ER was enough to change the students' reading attitudes and perception of their own language ability.

Research on the effect of ER in adults with literacy deficiencies has been conducted by Greenberg et al. (2006), Rodrigo, et al. (2007), and Greenberg, Wise, Morris, Frederick, and Rodrigo (2011). The first study found gains in reading fluency and in the use of expressive vocabulary by participants who mentioned that they were more confident about their reading ability and reported having a better attitude toward reading after the ER experience. The second study, Rodrigo et al. (2007), focused on implementing an ER library and the use of such a library. This study provides a detailed account of the criteria for building a successful library and for choosing read-aloud books for adults with low reading skills. The third study, by Greenberg et al. (2011), was mentioned at the beginning of the present study.

Other adult learning theorists have also seen the benefits of reading for the adult population in a study in which the readers were in control of their own learning (Merriam, Caffarella & Baumgartner, 2007). Some other benefits of reading for pleasure have been observed in both educational and personal development. Smith (1996) mentioned that adults who read more are considered to have a higher literacy performance because reading practice seemed to have an additive effect in literacy skills, that is, those who read more evidence higher literacy skills. A similar claim has been made about reading and vocabulary size—the more a person reads, the bigger his or her vocabulary size. Rodrigo (2009) suggested that the amount of reading one does is indeed a stronger predictor of vocabulary size than being a native speaker of a language. Similarly, the benefits of ER have also been observed at more individual levels: pleasure reading not only enhances readers' lives by allowing them to live other realities and other lives (Gambrell, 2008), but also by becoming a lifetime habit that will help in personal ways (Rane-Szostak, 1997). Besides, it has become clear that those who read for pleasure frequently will more often experience the value of reading, which could translate into a reading habit (Sanacore, 2002). Clearly, reading for pleasure and reading extensively bring numerous benefits to the reader.

Consequently, considering the importance of reading attitude in the development of reading habits, the present study assessed the reading attitude of the study participants and focuses on other key factors, introduced by Clark and Rumbold (2006) and Sanacore (2002), such as freedom to choose one's reading material, easy access to a great variety of texts, and a quiet and comfortable place to read.

The development of reading habits in the present study is analyzed with reference to ER as part of a reading intervention. The assumption underlying ER is that learners will be motivated to read and, consequently, will develop a positive reading attitude and a reading habit if they are provided with books at their own linguistic level, if the reading activity addresses the reader's interest, and if reading is undertaken in a low anxiety situation (i.e., when readers can choose their books and stop reading them if they find the books too hard and not very interesting).

## The Study

Reading habits by low literate adults have been reviewed in the Adult Education field through descriptive and/or correlational studies of literacy practice as related to demographic variables such as age, gender, race, employment status, and literacy proficiency (Mellard et al., 2007; Purcell-Gates et al., 2002; Scales & Rhee, 2001; Smith, 1996). The question of how extensive reading contributes to the development of reading habits among low literate adults has not been tackled in the literature. The present study is experimental in design and will examine and compare the reading habits of two groups, one approaching reading practice in the form of extensive reading (ER group) and the other without such a reading practice (no-ER group).

The purpose of this study is to assess the effect of two interventions to reading on the reading habits of adults who have low literacy skills. Since research suggests that reading attitude has an impact in the development of reading habits, reading attitudes will also be analyzed. This study tries to answer the following research questions (RQ):

1. What is the reading attitude (positive or negative) of our participants at the beginning of the study? RQ.1.2. Did the participants enjoy the books they read during intervention? RQ.1.3 Did the reading attitude of the participants change over time due to the intervention?
2. Can adults with a 3 to 5.9 grade reading level improve their reading habits after participating in a short-term reading intervention? If so, is there any difference between exposure to ER and non-exposure to ER? If so, which approach relates better to improving reading habits?
3. To what extent does being a native or a non-native speaker of English make a difference in the process of developing reading habits? How does the language variable affect each instructional model on the reading habits of the participants?

For RQ.1-1.3, it was hypothesized that participants would not have a positive attitude toward reading at the beginning of the study, that they would enjoy the books they were to read during the study, and that the reading attitudes of the ER participants would change positively due to the intervention. For RQ.2, it was hypothesized that the intervention implementing ER would be more effective than the intervention without ER in improving the participants' reading habits. For RQ.3, it was hypothesized that the variable 'language' would, under similar conditions, not make any difference in developing reading attitudes and reading habits.

## Method

### *Participants*

One hundred and eighty-one participants were enrolled in a 100-hour reading class in adult literacy programs in a metropolitan area in the Southeast of the United States. To be eligible to be part of the study, the participants had to be able to recognize single words on the *Woodcock Johnson Word-Letter ID* task (Woodcock & Johnson, 1990) at the 3 to 5.9 grade equivalency level.

The participants were very diverse with 53% African Americans, 29% Hispanics, 12% Asians, and 6% Caucasians. Seventy percent of the participants were female, and the average age was 36 years, ranging from 16 to 78 (as English-Piper, 2007, explains, adult literacy programs accept individuals as young as 16). Fifty-four percent spoke English as a second language, and 60% of the participants stated that English was the language they currently spoke most frequently. The non-native speakers of English, on average, had arrived in the United States 26 years prior to this study (ranging 3 to 57 years) and 87% had taken ESL classes at some point.

### *Instructional Approaches*

Originally, the participants were randomly assigned to four different instructional groups (see Greenberg et al., 2011, for a more detailed account of the instructional models):

- *Decoding/Fluency* (DF) model, in which students received explicit instruction in decoding and engaged in fluency practice.
- *Decoding/Comprehension/Fluency* (DCF) model, in which students were explicitly taught decoding, did comprehension activities, and engaged in fluency practice.
- *Extensive Reading* (ER) model, in which students had access to a library with a variety of books on different topics and levels. The only literacy task in this model was reading and enjoying the reading experience.
- *Decoding/Comprehension/Extensive Reading/Fluency* (DCEF): Students engaged in all of the aspects above.

Since previous research in second language (L2) has claimed that changes in affective variables, such as in reading attitude, behavior, and motivation to read, can happen with pleasure reading and in short-term treatments (Day & Bamford, 1998; Kim, 2003; Liburd & Rodrigo, 2012), and even with a single book (Cho & Krashen, 2001; Rodrigo, 2011), this study regrouped the instructional groups for statistical analysis and according to instructional use of extensive reading (ER). Thus, ER and DCEF, the two groups with some form of pleasure reading, became a single group under the rubric of 'ER group.' By the same token, DF and DCF became the 'no-ER group,' with very direct, structured instruction, corrective reading in a highly scripted way, and with no practice or activities for pleasure reading. The time allowed for each activity in each instructional model is listed in Table 1. The rightmost column shows the two groups as combined for this study.

Table 1. *Time allowed to each component in the different models*

Models	Decoding	Fluency	Comprehension	Extensive Reading	Groups for the present study
DF	100 min	15 min			No-ER ( $n = 99$ )
DCF	50 min	15 min	50 min		
DCEF	33 min	15 min	33 min	33 min	ER ( $n = 82$ )
ER				115 min	

*Note.* All groups included a 5-minute break (for a more detailed account of each approach see Greenberg et al., 2006, and Rodrigo et al., 2007). Each group met for eight hours per week (two hours per day, four days a week, Monday through Thursday). The ER groups met for an average of 93 hours ( $SD = 16$ ), and the no-ER groups for 95 hours ( $SD = 15$ ).

In order to determine if the demographic component remained equal after merging the four instructional groups into two, Chi-square analyses were performed. This analysis indicated that the two groups, ER and no-ER did not differ significantly ( $p > .05$ ) in the proportion of ethnicity, gender, age, education level, and native language of the subjects.

### *Instruments*

A Reading Pattern Survey was administered prior to, at the end of, and 6 months after treatment. This survey included 11 questions on topics such as reading attitude (if they liked reading) and reading habits (number of books read, media exposure, reading whole books, visits to a bookstore and library). A two/three/four-point scale was used for the participants to rank their responses. Some of the responses were combined and composite scores were used for statistical analysis. In this survey, each construct is examined by only one or two questions, and therefore scale-reliability tests are not applicable. Please see Appendix 1 for list of survey questions utilized in this study.

## **Results**

Exploratory analyses, through frequency distributions, were conducted to determine whether the two instructional groups differed significantly before treatment in terms of their relationship to the variables of the study. The analyses indicated that the two groups did not differ significantly ( $p > .05$ ). Since the exploratory analyses showed that the data were not normally distributed for a majority of the questions, we used Chi-square analyses. Only when we compounded scales was MANCOVA used. On our initial analysis of the data, it was decided not to look for outliers because extreme responses could be an effect of a treatment.

### *Attitude toward reading*

To assess attitude toward reading, the participants were asked if they '*like reading*.' Table 2 shows that a majority of the participants in each group said they did (96% in ER group vs. 89% in No-ER groups), and only some indicated that they did not. Chi-square shows that the two groups did not significantly differ in attitude toward reading at the beginning of the treatment ( $p > .05$ ). After the intervention and in the follow-up, the participants maintained their positive feeling about reading, and no difference was found for reading attitude between the two groups

( $p > .05$ ). We can conclude therefore that the participants in both instructional groups started the study with a positive attitude toward reading and that they maintained it through the end of the study.

Table 2. *Do you like reading? By group*<sup>3</sup>

	Pre			Post			Follow up		
		ER	No-ER		ER	No-ER		ER	No-ER
	<i>n</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n</i>	<i>n (%)</i>	<i>n (%)</i>
Yes <sup>4</sup>	167	79 (96)	88 (89)	143	67 (97)	76 (96)	75	39 (95)	36 (97)
No	14	3 (4)	11 (11)	5	2 (3)	3 (4)	3	2 (5)	1 (3)
Total	181	82	99	148	69	79	78	41	37

When we compare native and non-native speakers of English and instructional approach, Chi-square did not reveal any difference at any of the three moments of the study ( $p > .05$ ).

### *Reading enjoyment*

In order to determine whether the participants had had a good experience when reading, we asked them if they had enjoyed the books they had read. Table 3 shows that a majority of the participants said they had done so at the three moments of the study. But Chi-square does not show any difference either between groups or by language ( $p > .05$ ).

Table 3. *Did you enjoy the books you read? By group*

	Pre			Post			Follow up		
		ER	No-ER		ER	No-ER		ER	No-ER
	<i>n</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n</i>	<i>n (%)</i>	<i>n (%)</i>	<i>N</i>	<i>n (%)</i>	<i>n (%)</i>
Yes	101	53 (96)	48 (94)	124	70 (100)	54 (98)	84	49 (98)	35 (97)
No	5	2 (4)	3 (6)	1		1 (2)	2	1 (2)	1 (3)
TOTAL	106	55	51	125	70	55	86	50	36

### *Reading habits*

*Number of books read: pleasure reading.* The participants were asked about the number of books they had read. As shown in Table 4, the number of books read by both groups is about the same at the beginning of the study. A majority read between 3 to 10 books (42% in the ER group and 46% in the no-ER group). Chi-squares do not show any difference between the groups before treatment ( $p > .05$ ). However, the results afterwards and following up treatment show a positive change in the reading habit for the ER group. This group read more books than the no-ER group. Thirty-six percent of the ER group read 11 to 40 books versus 2% of the no-ER. Chi-square shows that the two groups are now different, and this difference is statistically significant ( $\chi^2 = 29.026$ ,  $df = 3$ ,  $n = 134$ ,  $p = .000$ ,  $Eta = .465$ ) after treatment. This outcome was expected, with reading being an essential component of the ER instructional model. However, 6 months after treatment, the participants in the ER group were still reading more books than the no-ER (33% of the ER vs. 19% of the no-ER read between 11 to 40 books, and 6% vs. 39% read between 1-2),



and the difference between the two groups is significant ( $\chi^2 = 14.878$ ,  $df = 3$ ;  $n = 89$ ,  $p = .002$ ,  $\text{Eta} = .409$ ). We can therefore conclude that the ER intervention was more effective in promoting a reading habit, given that they read more often, and that its effect remained after 6 months at the follow-up period.

Table 4. *Number of books read. By group*

		Pre		Post**		Follow up**			
		ER	No-ER		ER	No-ER		ER	No-ER
	<i>n</i>	<i>n</i> (%)	<i>n</i> (%)	<i>n</i>	<i>n</i> (%)	<i>n</i> (%)	<i>n</i>	<i>n</i> (%)	<i>n</i> (%)
1-2	52	28 (41)	24 (42)	29	8 (11)	21 (34)	19	3 (6)	19 (39)
3-10	55	29 (43)	26 (46)	69	32 (45)	36 (58)	41	25 (52)	16 (39)
11-40	10	6 (9)	4 (7)	27	26 (36)	1 (2)	24	16 (34)	8 (20)
> 40	8	5 (7)	3 (5)	10	6 (8)	4 (6)	5	4 (8)	1 (2)
Total	125	68	57	134	72	62	89	48	41

Note. \*\* =  $p < .001$

If we compare the ‘language’ variable for each group, we find that, before treatment, the native speakers in the ER group had read more books than the non-native speakers ( $\chi^2 = 7.925$ ,  $df = 3$ ;  $n = 125$ ;  $p = .048$ ,  $\text{Eta} = .341$ ), but, in the post assessment and in the follow-up, there is no difference in the amount of books read by native and non-natives in each group. We interpret this to mean that the intervention helped the non-native speakers catch up with the native speakers.

*Amount of ‘media’ reading; reading for being informed.* To analyze the participants’ amount of media print exposure (e.g., ads, magazines, newspapers, Internet, and e-mail), they were asked about how much they read of different types of print material. A three-point scale questionnaire was used with the options of *never*, *sometimes*, and *frequently*. Chi Square did not show any statistical difference between the two groups at the three moments of the study ( $p > .05$ ) for any of the ‘media’ readings. Nor was there a difference when the language variable was considered.

Since the two groups showed similar performance, they were combined in order to establish which ‘media’ category they read more frequently. Table 5 shows that the three print sources most widely read were magazines, newspapers, and advertisements, which a majority of the respondents reported reading ‘sometimes’ at the three moments of the study. These results are consistent with previous research (Smith, 1996) in which newspapers and magazines were the media print most frequently read.

Table 5. *Print exposure by media categories. Pre-post-follow-up treatment. All together.*

	Pre				Post				Follow up			
	N		S	F	N		S	F	N		S	F
	<i>n</i>	%	%	%	<i>n</i>	%	%	%	<i>N</i>	%	%	%
Ads	177	20	51	29	166	15	61	25	124	17	61	22
E-mail	181	39	34	27	166	33	35	33	124	26	41	33
Internet	181	29	43	29	166	19	49	33	124	22	35	43
Magazines	181	15	73	12	179	8	71	20	124	8	69	23
Newspaper	180	20	64	16	178	11	68	21	123	14	66	20

Note. N = Never, S = Sometimes, F = Frequently

A total score was created using the amount of print exposure by media categories (ads, e-mail, Internet, magazine, newspaper). Inspection of the data showed that they were normally distributed<sup>5</sup>. To analyze if there was any statistically significant difference between the two groups for the media print variable, we ran a MANCOVA repeated measures analysis with 'group' as an independent variable, amount of media print exposure as a dependent variable, and language (native of English and English as a second language) as a covariate. Table 6 shows the descriptive data including mean and standard deviations. These figures show a significant change of the two groups over time,  $F(1,102) = 8.512, p = .004$ , but there was neither interaction between time and approach nor difference between the instructional groups or language groups,  $Eta = .077$ , power = .824.

Table 6. *Amount of 'media' print exposure. By group.*

Groups	<i>n</i>	Pre	Post	Follow up
		M (Sd)	M (Sd)	M (Sd)
ER	52	2.06 (.34)	2.11 (.40)	2.18 (.38)
No-ER	53	1.96 (.44)	2.17 (.42)	2.10 (.48)

Consequently, the two treatments appear to have had a similar effect of favoring reading media, without either group being superior to the other. A possible reason why media print exposure did not vary between the two groups may relate to the fact that reading this type of material was not emphasized as part of the daily activities in class: the participants did not practice it as much and, therefore, had very little chance for the habit to be created.

*Book-completion: reading for pleasure.* In order to assess reading habit and literary experience, the participants were asked whether they had completed a whole book. Table 7 shows their responses. When we compare the two groups at the beginning of the study, we find that the book-completion rates for the two groups are similar since all 108 participants who answered this question said they would normally finish the books they started. It is after the treatment and in the follow-up that a difference is observed. Then only 7% of the ER group versus 31% of the no-ER group said they had never read a whole book. The difference between the two groups is highly significant ( $\chi^2 = 15.383, df = 1, n = 161, p = .000, Eta = .309$ ) and shows change in reading behavior for the ER group. This may be seen as behavior that the ER group developed as a result of the type of reading experience this group had had—pleasure reading. It is known that when a reader (avid or not) starts a book, it takes a little while to get interested in it, understand

the story, identify the characters, follow the plot, etc. It may well be the case that the subjects in the ER group learned to overcome that crucial moment that every reader faces before deciding whether to continue to read or quit and drop the book. Now, one could argue that this is a normal effect due to the particular type of instruction they had. However, it should be noted that this literate-like behavior remained fairly strong over time, (i.e., 6 months after treatment [ $\chi^2 = 10.883$ ,  $df = 1$ ,  $n = 104$ ,  $p = .001$ ,  $Eta = .323$ ]). Thus, for the ER group, not only has the number of books increased per participant but also the way the participants read changed. It seems that the subjects who had a chance to read extensively and for pleasure developed more of an ability to stick to a book until finished, a phenomenon that requires concentration, willingness, and interest, qualities that the participants in the ER group did not have when they started the reading program.

Table 7. *Reading habit. Book-completion. By group.*

		Pre			Post**			Follow up*	
		ER	No-ER		ER	No-ER		ER	No-ER
	<i>n</i>	<i>n</i> (%)	<i>n</i> (%)	<i>n</i>	<i>n</i> (%)	<i>n</i> (%)	<i>n</i>	<i>n</i> (%)	<i>n</i> (%)
Yes	108	56 (74)	52 (63)	129	70 (93)	59 (69)	85	49 (94)	36 (69)
No	0	0	0	32	5 (7)	27 (31)	19	3 (6)	16 (31)
TOTAL	108	56	52	161	75	86	104	52	52

Note. \*\*  $p < .001$ ; \*  $p < .05$

Additionally, if we compare language and instructional approach, there is a group difference for the ER group after the treatment: in this group ( $\chi^2 = 5.804$ ,  $df = 1$ ,  $n = 75$ ,  $p = .016$ ,  $Eta = .278$ ), 100% ( $n = 39$ ) of the native speaker respondents versus 86% ( $n = 36$ ) of the non-native readers finished the books they had picked. On the contrary, both the native and the non-native participants in the no-ER group do not show any quantitative difference for reading behavior ( $p > .05$ ) on the post-test and in the follow-up. Consequently, it seems that the ER intervention was in general more beneficial, especially for the native speakers in the group. Also, 6 months after treatment, a difference is observed in the no-ER group, in which more native speakers said “yes” 95% (19) versus 53% (13) non-native, and the difference is significant ( $\chi^2 = 10.131$ ,  $df = 1$ ,  $n = 52$ ,  $p = .001$ ,  $Eta = .441$ ). This means that the two treatments were more effective in promoting the reading of complete books among the native speakers.

*Visiting the bookstore and visiting the library.* Another important aspect of reading habits by literate readers is their visits to bookstores or libraries in order to buy, check out or look at books. Table 8 presents the frequency of bookstore visits. Chi-square did not show any difference between the two groups before treatment ( $p > .05$ ). The participants in both groups had similar routines of bookstore visits: 37% of the participants in the ER group and 49% of the no-ER group had never visited a bookstore to buy or look at books. After treatment, 77% of the ER group had been to a bookstore to look at or buy books versus 60% of the no-ER group. Chi-square, however, revealed a significant difference ( $\chi^2 = 5.464$ ,  $df = 1$ ,  $n = 176$ ,  $p = .019$ ,  $Eta = .176$ ) for bookstore visits. It seems that the ER intervention was better at creating a habit of bookstore visits. In the follow-up, the ER group still goes to a bookstore more often (74%) than the no-ER group (57%), but the difference is not significant ( $p > .05$ ). Similarly, considering the ‘language’ and the ‘intervention’ variables, Chi-square did not show any statistically significant

difference for bookstore visits between native and non-native speakers at the three times of the study ( $p > .05$ ).

Table 8. *Visiting Bookstores. By Group*

	Pre			Post**			Follow up		
		ER	No-ER		ER	No-ER		ER	No-ER
	<i>n</i>	<i>n</i> (%)	<i>n</i> (%)	<i>n</i>	<i>n</i> (%)	<i>n</i> (%)	<i>n</i>	<i>n</i> (%)	<i>n</i> (%)
Never	78	30 (37)	48 (49)	57	19 (24)	38 (40)	35	13 (26)	22 (43)
St-Freq	101	51 (63)	50 (51)	119	62 (77)	57 (60)	66	37 (74)	29 (57)
TOTAL	179	81	98	176	81	95	101	50	51

Note. St-Freq: sometimes-frequently; \*\*  $p < .001$

Table 9 describes the frequency of library visits. The habit of visiting a library differs in the two groups before treatment ( $\chi^2 = 7.000$ ,  $df = 1$ ,  $n = 179$ ,  $p = .008$ ,  $\text{Eta} = .198$ ), with the ER group being the one that more often visits a library (78% vs. 59%). After treatment, the ER group still visits a library more frequently (85% vs. 74%), but the difference is not significant ( $p > .05$ ). However, 6 months after treatment, in the follow-up, the ER group appears to continue to visit a library more often (82% vs. 63%) while the no-ER group shows a decrease, and this difference is statistically significant ( $\chi^2 = 4.672$ ,  $df = 1$ ,  $n = 101$ ,  $p = .031$ ,  $\text{Eta} = .215$ ). These results suggest that the ER intervention had a more lasting positive effect on promoting literate behavior—as seen in the 6-month follow-up frequency of visits to libraries and bookstores—than the no-ER intervention. This effect remained over a 6-month follow-up period for the ER group, who continued to visit a library once the reading program had ended.

Table 9. *Visiting libraries. By group.*

	Pre**			Post			Follow up**		
		ER	No-ER		ER	No-ER		ER	No-ER
	<i>n</i>	<i>n</i> (%)	<i>n</i> (%)	<i>n</i>	<i>n</i> (%)	<i>n</i> (%)	<i>n</i>	<i>n</i> (%)	<i>n</i> (%)
Never	58	18 (22)	40 (41)	37	12 (15)	25 (26)	28	9 (18)	19 (37)
St-Freq	121	63 (78)	58 (59)	139	69 (85)	70 (74)	73	41 (82)	32 (63)
TOTAL	179	81	98	176	81	95	101	50	51

Note. St-Freq: sometimes-frequently; \*\*  $p < .001$

Considering the ‘language’ variable, Chi-square did not show any statistically significant difference for library visits for native and non-native speakers at any of the three times of the study ( $p > .05$ ).

## Discussion

Our research questions sought to determine whether the study participants had developed a positive attitude toward reading and, if so, which instructional approach had favored new reading habits better. We also wanted to examine whether the changes, if any, related to the participants’ being native or non-native speakers of English.

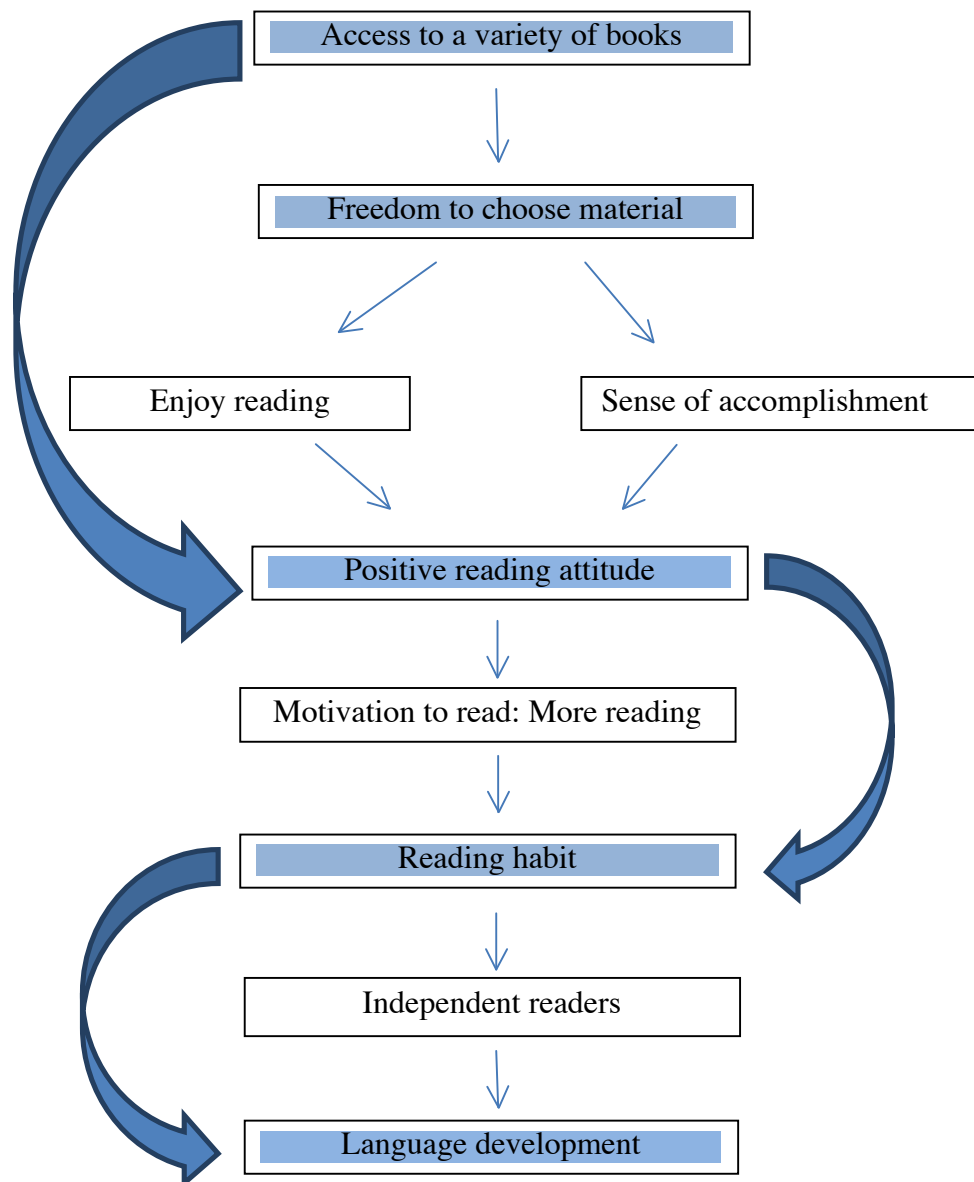
Our first hypothesis, in the RQ.1, on reading attitudes, was not confirmed: both groups showed a high positive attitude toward reading at the beginning of the study (96% in the ER-group and 89% in the no-ER group), and it remained over time. This is a surprising finding since research in adult education indicates that positive experiences with reading should not be expected among low literate adults. Our hypothesis in RQ.1.2 was confirmed. A majority of the participants did enjoy the books they had read, even the ones they had read prior to intervention. These results could be a possible explanation for findings in RQ.1, and it would be consistent with previous research, which suggests that a positive experience when reading, even with a single book, is enough to create a positive attitude towards reading (Cho & Krashen, 2001; Rodrigo, 2011). Certainly, more research on reading attitude by low literate adults is needed.

At any rate, it is a fact that all the participants began the study with a positive attitude toward reading. It is important to note, however, that only those who had access to books and were encouraged to read during the experience can be claimed to have developed reading habits. This is an important finding. Consequently, we could argue that a positive attitude toward reading in and of itself is not enough to help participants in a reading program develop reading habits. Program participants need to be encouraged to read and easy access to books needs to be ensured. Practitioners in the field of adult education (Clark & Rumbold, 2006; Sanacore, 2002; Smith 1996) and second language acquisition (Day & Bamford, 1998; Krashen, 2004) have referred to the key role of access to books in the process of developing reading skills and habits. The present study provides further evidence for such a claim and presents a model containing the steps that favor the development of a reading habit, which starts with a healthy library –containing a variety of books (genre and level), and easy access and freedom to select books<sup>6</sup>. It is also important to stress here that enjoyment and accomplishment are essential requirements in promoting a positive reading attitude, which is a catalyst for motivation to continue to read and eventually develop a reading habit that could lead to language proficiency (Yamashita, 2007). Figure 1 shows a model with the steps that favor the development of a reading habit.

Our hypothesis for the RQ.2 on reading habits was confirmed: adults with a 3 to 5.9 grade reading level appeared to have improved their reading habits after participating in a short-term reading intervention program. The participants in the ER group showed higher gains in reading habits than the participants in the no-ER group, and the difference remained over time, 6 months after treatment. It seems that the ER intervention was more effective at helping struggling readers engage in more frequent reading, changed the way they read (they developed the ability to stick to a book and finish it), and prompted them to visit a library and/or a bookstore more often, which they did. What did not change were the media literacy practices of the two groups, which was not a primary focus of the intervention in class; in fact, reading media was very infrequently done. Nonetheless, the observed new reading habits and their resilience over time is an important finding, and it corroborates what research has established for English as a L1 children and L2 adults (Day & Bamford, 1998; Elley, 1991; Krashen, 2004), that extensive reading and reading for pleasure are significant catalysts for literacy, a valid claim even in the case of adults who struggle with reading and in short-duration reading programs.

Research has also established that reading habits and motivation to read are closely related. In adult education it has been shown that amount of reading relates to motivation, and motivation is, at the same time, affected by the level of enjoyment and achievement resulting from a reading

experience that ensures self-selection of reading material and an anxiety-free environment (Clark & Rumbold, 2006; Krashen, 1993; Rodrigo, 2011). The fact that the participants in the ER group acquired the habit of book-completion could be considered evidence that the subjects developed a motivation to read, since “a motivated and interested reader is likely to persevere with difficult text” (Mellard et al., 2007, p. 209). We can confidently argue that the participants in the ER group developed sustained motivation to read: they continued to read after the reading intervention had ended, they read complete books, and read more frequently. This present study suggests that there are no time and/or age limits in order to start enjoying reading and to take advantage of its benefits, a claim that is consistent with Sheldrick-Ross, McKechnie and Rothbauer’s (2006) position that, though the fundamentals for reading start in childhood, it is never too late to develop them.



**Figure 1.** Model for the development of a reading habit.

Our hypothesis for the RQ.3 on the language variable was only partially confirmed: native speakers of English read and finished more books than non-native speakers, but there is no difference in all the other variables reviewed in the present study.

## Conclusion

This study compares the effect of two instructional approaches to reading on the development of reading habits and literacy behavior by low literate adults with a reading level of grades 3 to 5.9 attending a short-term reading program. The two instructional models differed in that one of them, the ER group, included extensive reading in daily instruction, while the other, the no-ER group, approached reading through direct instruction and without extensive reading practice. The ER group used all or part of class time to do extensive reading. The no-ER group used class time for explicit teaching of reading. The analysis of the data allows us to conclude that for adults with low reading skills, the ER intervention appears to relate to increased and improved reading habits. Most importantly, these crucial changes in literacy behavior were also observed to extend themselves over time (i.e., as measured 6 months after treatment). Our results, therefore, support the view that ER can be a useful tool for promoting reading habits among adults with low reading skills. Consequently, pleasure reading through an extensive reading component in literacy programs is highly desirable and needed. By acknowledging the importance of pleasure reading in the process of becoming literate, we are opening a new venue to help low literate adults to overcome reading deficiencies and, eventually, to become independent learners.

This study is limited by the inherent bias of self-reported data. However, this is an intrinsic limitation that is difficult to overcome when dealing with feelings and behavior. Suggestions for further research would be to conduct a follow-up study that analyzes and compares the participants that were merged into the ER group in order to find out whether the amount of time devoted to extensive reading in each group had any effect on their reading habits and linguistic gains. Regarding the survey, future research should consider multiple items measuring each construct, including a 5-level Likert scale option, so that more detailed responses can be ensured and recorded. Additionally, future administrations of our instrument to similar cohorts of students will allow us to determine the typical sizes of the effects we have reported here, and to compare them with the effects obtained by other researchers studying this area.

## Notes

1. *Reading Instruction for Low Literate Adults*, funded by the Eunice Kennedy Shriver National Institute of Child Health and Human Development, the National Institute for Literacy, and the U.S. Department of Education, Office of Vocational and Adult Education grant #1 R01 HD43801.
2. Participants come from the National Adult Literacy Survey (NALS) conducted in 1992.
3. The difference in total number of participants is due to a different number of people answering the questions at different points in time. This situation applies to all the Tables in the study.

4. The answer 'yes' includes responses containing 'yes' and 'sometimes.'
5. We applied the standard statistical tests for normality: tests for skewedness and kurtosis, and the graphical plots, which reveal deviations from normality.
6. For more information about the library used in a previous stage of this study, please refer to Rodrigo et al. (2007).

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## Appendix A

### *Survey*

Survey items included in this study:

1. In general, would you say that you like reading? (*For analysis purposes, 'yes' and 'sometimes' were combined into 'yes.'*)

1. yes
2. sometimes
3. no

2. Would you say that you read advertisements?

1. never
2. sometimes
3. frequently

3. Would you say that you read e-mail?

1. never
2. sometimes
3. frequently

4. Would you say that you read information from the computer?

1. never
2. sometimes
3. frequently

5. Would you say that you read magazines?

1. never
2. sometimes
3. frequently

6. Would you say that you read newspapers?

1. never
2. sometimes
3. frequently

7. Have you ever read a whole book?

1. yes
2. no

7a. If yes, did you like the book?

1. yes
2. no

8. About how many books do you think you read in the last year?
1. one or two
  2. 3-10
  3. 11-40
  4. more than 40
9. Do you ever go to a bookstore to buy or look at books? (*The choices 'sometimes' and 'frequently' in question 9 and 10 were combined for analysis purposes.*)
1. never
  2. sometimes
  3. frequently
10. Do you go to a library to check out or look at books?
1. never
  2. sometimes
  3. frequently

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